

## IN THE CLAIMS

*This version of the claims replaces and supersedes all prior versions of the claims.*

1. (Currently Amended) In a cellular telephone system comprising at least one antenna for detecting a received signal and a signal processor for processing the received signal detected by the at least one antenna, a method of determining the amount of signal power and interference power in a received signal, the received signal having a wanted signal providing said signal power and a plurality of interfering signals providing said interference power, the wanted signal being encoded such that there is a channel structure including a data channel and a broadcast channel, the method comprising use of the signal processor in the steps of:

a) selecting a plurality of first portions having a first known structure ~~structures~~ in the wanted signal, said plurality of first portions ~~known structures~~ being identified using a further known structure within the broadcast channel to provide a signal having known periods with defined properties;

b) processing the received signal in accordance with said plurality of first portions ~~known structures~~ to derive a set of amplitude values corresponding to the said first known structures; and

c) using the set of amplitude values to determine both a signal power level and an interference power level for at least part ~~a portion~~ of the received signal.

2. (Cancelled)

3. (Currently Amended) A method according to claim 1, wherein ~~[[and]]~~ step a) includes identifying locations of the further known structure within the wanted signal, and using the identified locations to derive the locations of said plurality of first portions ~~known structures~~.

4. (Currently Amended) A method according to claim 1, wherein said plurality of first portions ~~known structures~~ comprises Frequency Correction Bursts.
5. (Original) A method according to claim 3, wherein said further known structure comprises sync bursts.
6. (Currently Amended) A method according to claim 1, wherein the step of identifying said plurality of first portions ~~known structures~~ includes using pointers selected by said further known structure.
7. (Currently Amended) A method according to claim 6, wherein said pointers are stored in a look-up table, and step a) includes using said pointers to select said plurality of first portions ~~known structures in said received signal~~.
8. (Currently Amended) A method according to claim 1, wherein step b) comprises correlating the received signal with said selected plurality of first portions ~~known structures~~ to derive said amplitude values.
9. (Previously Presented) A method according to claim 1, wherein step c) comprises determining mean and variance values for said amplitude values.
10. (Previously Presented) A method according to claim 1, wherein step c) further comprises using calibration factors to produce an absolute power value for the wanted signal.
11. (Previously Presented) A method according to claim 1, wherein step c) further comprises using said calibration factors to produce an absolute power value for the interfering signals.

12-26 (Cancelled)

27. (Currently Amended) ~~A method according to claim 1,~~ In a cellular telephone system comprising at least one antenna for detecting a received signal and a signal processor for processing the received signal detected by the at least one antenna, a method of determining the amount of signal power and interference power in a received signal, the received signal having a wanted signal providing said signal power and a plurality of interfering signals providing said interference power, the wanted signal being encoded such that there is a channel structure including a data channel and a broadcast channel, the method comprising use of the signal processor in the steps of:

a) selecting a plurality of first portions having a first known structure in the wanted signal, said plurality of first portions being identified using a further known structure within the broadcast channel to provide a signal having known periods with defined properties;

b) processing the received signal in accordance with said plurality of first portions to derive a set of amplitude values corresponding to the said first known structures; and

c) using the set of amplitude values to determine both a signal power level and an interference power level for at least part of the received signal,

wherein said received signal comprises first and second[[,]] time co-incident received signals, said first received signal providing the first ~~further~~ known structure used in step (a) and [[where]] step (b) comprising processing [[the]] a second received signal to provide the set of amplitude values for determining the interference power level of the interference signals.